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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,345	02/01/2002	David Dean Rowley	23415-012	7596

29315 7590 03/30/2004

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EXAMINER

HARRIS, CHANDA L

ART UNIT	PAPER NUMBER
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3714

10

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/060,345

Applicant(s)

ROWLEY ET AL.

Examiner

Chanda L. Harris

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7.9</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

In response to the amendment filed on 11/28/03, Claims 1-48 are pending.

Claim Objections

1. Claim 7 is objected to because of the following informalities: line 9- "associated" should be "associates". Appropriate correction is required.
2. Claim 14 is objected to because of the following informalities: line 5- "systems" should be "system". Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-20 and 47-48 are rejected because they are not embodied on a computer-readable medium. Claims to computer programs or computer signals per se are not statutory subject matter. On the other hand, a claim to a computer readable medium encoded with a computer program or computer signal is a computer element which defines structural and functional interrelationships between the computer program or computer signal and the rest of the computer which permits the computer program's functionality to be realized, and is thus statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5,7,9-12, 14-19, 21-25, 27-32, 34-38, 40-45, and 47-48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Papadopoulos (US 6,099,320) in view of Johnston et al. (US 2002/0103882).

1. [Claims 1,7-8,21,34,47]: Regarding Claims 1,7-8, 21, 34, and 47, Papadopoulos discloses a user interface (i.e. VIP directory) that displays a list of classroom exercises (i.e. training modules or training courses), wherein each classroom exercise is associated with one or more virtual machines (e.g. Virtual Interactive Player, different applications, courses), the user interface enabling a user to select a classroom exercise. See Col.4: 65-67, Col.5: 11-12, and Col.8: 1-25. Papadopoulos discloses a database (i.e., VIP directory) that determines the one or more virtual machines (i.e. courses) associated with the selected classroom exercise (i.e. training module) and a virtual machine launcher (i.e. CD slot of the VIP) that launches the virtual machines with which the selected classroom exercise is associated in response to the student indicating that the student would like to perform the selected exercise. See Col.4: 65- Col.5: 12 and Col.8: 13-34. Papadopoulos discloses a computer program product (i.e.

CD ROM, floppy disk) in FIG. 15. A computer signal would have been an inherent feature of Papadopoulos' invention.

Papadopoulos does not disclose expressly wherein each virtual machine is associated with a different operating system, a virtual machine platform that enables multiple operating system environments to run concurrently using hardware resources of the classroom computer system. However, associating virtual machines with different operating systems (i.e., different operating environments) and virtual machine platforms that enable multiple operating system environments to run concurrently (i.e., all running but one is active) are old and well known in the art. Johnston teaches such on p. 4, [0051] and p.6, [0070]-[0073]. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate wherein each virtual machine is associated with a different operating system into the method and system of Papadopoulos, in light of the teaching of Johnston, in order to facilitate a student accessing a series of computers using his or her own computer.

2. [Claims 2,9,22,35]: Regarding Claims 2,9, 22, and 35, Papadopoulos discloses wherein the database comprises a classroom database (i.e. VIP directory) that stores the names of the classroom exercises (i.e., courses) and associates each name with one or more virtual machine identifiers (e.g., color codes). See Col.5: 2-12.

3. [Claims 3,10,23,36]: Regarding Claims 3,10, 23, and 36, Papadopoulos discloses wherein the database is adapted to store the one or more of the virtual machine identifiers (e.g., color codes) associated with the corresponding selected classroom exercise. See Col.4: 65 – Col.5: 12 and Col.8:26-29.

4. [Claims 4, 11, 18, 24, 31, 37,44]: Regarding Claims 4,11, 18, 24, 31, 37, and 44, Papadopoulos discloses wherein each one of the one or more virtual machines with which the selected classroom exercise is associated comprises a set of virtual machine files and wherein said set of VM files consists of one or more files (i.e. files on a virtual CD ROM). See Col.8: 26-34.
5. [Claims 5,12,19, 25, 32,38,45]: Regarding Claims 5,12, 19, 25, 32, 38, and 45, Papadopoulos discloses wherein each set of VM files comprises, at the least, a virtual disk file (i.e. a virtual CD ROM). See Col.8: 26-29.
6. [Claims 14,27,40,48]: Regarding Claims 14,27, 40, and 48, Papadopoulos discloses means (i.e. VIP) for determining a name of a course that is available to be installed onto the classroom computer, wherein the course is associated with one or more classroom exercises (i.e. training modules or training courses) and each classroom exercise is associated with one or more virtual machines (e.g. Virtual Interactive Player, different applications, courses), wherein each virtual machine is associated with a set of VM files (i.e. VIP directory). See Col.4: 65-67, Col.5: 11-12, and Col.8: 1-25. Papadopoulos discloses means (i.e. VIP directory) for displaying the name of the course to a user of the system. See Col.8: 1-7. Papadopoulos discloses means (i.e. mouse, keyboard) for enabling the user to select the course and means for installing the selected course on the classroom computer. See Col.8: 26-36 and FIG. 15. Papadopoulos discloses means (i.e. VIP Directory) for determining the names of the one or more classroom exercises associated with the selected course name. See Col.8: 1-13. Papadopoulos discloses a means for (i.e. authoring station) storing the course name and the names of

the one or more classroom exercises in a database (i.e. VIP Directory) that is accessible to the classroom computer, wherein the course name (i.e. course title) is associated with corresponding classroom exercises names to enable the user to retrieve the names of the one or more classroom exercises associated with the selected course name. See Col.4: 65-Col.5: 12 and Col.8: 13-34. Papadopoulos discloses means (i.e. VIP Directory) for determining a VM (e.g. course) that is associated with one of the one or more classroom exercises. See Col.8: 1-25. Papadopoulos discloses means (i.e. authoring station) for storing in a storage device the set of VM files belonging to said determined VM, wherein the storage device is accessible to the classroom computer. See FIG.15. A computer signal would have been an inherent feature of Papadopoulos' invention. Papadopoulos does not disclose expressly wherein each virtual machine is associated with a different operating system, a virtual machine platform that enables multiple operating system environments to run concurrently using hardware resources of the classroom computer system. However, associating virtual machines with different operating systems (i.e., different operating environments) and virtual machine platforms that enable multiple operating system environments to run concurrently (i.e., all running but one is active) are old and well known in the art. Johnston teaches such on p. 4, [0051] and p.6, [0070]-[0073]. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate wherein each virtual machine is associated with a different operating system into the method and system of Papadopoulos, in light of the teaching of Johnston, in order to facilitate a student accessing a series of computers using his or her own computer.

7. [Claims 15,28,41]: Regarding Claims 15,28, and 41, Papadopoulos discloses means (i.e. authoring station) for storing a VM identifier in the database, wherein said VM identifier identifies said determined VM. See FIG.15. Papadopoulos discloses a computer program product (i.e. CD ROM, floppy disk) in FIG.15.
8. [Claims 16,29,42]: Regarding Claims 16,29, and 42, Papadopoulos discloses wherein the name of the classroom exercise that is associated with the determined VM is further associated with said VM identifier (i.e. course title) so that the system is adapted to retrieve the VM identifier upon selecting the name of the classroom exercise. See Col.5: 2-12 and Col.8: 13-34.
9. [Claims 17, 30, 43]: Regarding Claims 17,30, and 43, Papadopoulos discloses wherein said VM identifier (i.e. course title) is configured to locate said set of VM files stored on said storage device. See Col.8: 26-34.

Claims 6,13,20,26,33, 39, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papadopoulos/Johnston as applied to claims 5, 12, 19, 25, 32, 38, and 45 above, and further in view of Nowlin, Jr. (US 5,953,536).

[Claim 6,13,20,26,33,39,46]: Regarding Claims 6,13,20,26,33, 39, and 46, Papadopoulos/Johnston does not disclose expressly a suspended state file. However, he does disclose courses that are unavailable (and hence, suspended) until the student has completed the prerequisite course: Upon completion of the prerequisite course, the course becomes available for access automatically. Moreover, Nowlin, Jr. teaches a suspended state file (i.e. suspended application) in Col.6: 27-31. Therefore, at the time

of the invention, it would have been obvious to one of ordinary skill in the art to incorporate a suspended state file into the method and system of Papadopoulos/Johnston, in light of the teaching of Nowlin, Jr. in order to allow power management to occur.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Nakajima et al. (US 5,511,217)
 - virtual machine system provided by the present invention wherein multiple operating systems run on a supercomputer
- Tanaka et al. (US 5,553,291)
 - virtual machine runs multiple operating systems
- Solomon (US 6,269,409)
 - concurrent execution of operating systems
- Traut (US 2002/0082823)
 - simultaneous function of multiple operating systems
- Bui et al. (US 2002/0099876)
 - multiple heterogeneous operating systems running simultaneously
- Lee et al. (US 2003/0061540)
 - multiple heterogeneous operating systems running simultaneously
- Dawkins et al. (US 2002/0124127)

- multiple heterogeneous operating systems running simultaneously
- Lee et al. (US 2002/0129212)
 - multiple heterogeneous operating systems running simultaneously
- Kapoor et al. (US 2002/0194437)
 - multiple heterogeneous operating systems running simultaneously
- Dawkins et al. (US 2003/0014738)
 - multiple heterogeneous operating systems running simultaneously
- Brown et al. (US 2003/0028523)
 - computer system configured to run multiple operating systems
- Austen et al. (US 2003/0056155)
 - multiple heterogeneous operating systems running simultaneously
- Austen et al. (US 2003/0033512)
 - multiple heterogeneous operating systems running simultaneously


Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection directed to the rejection under 35 U.S.C. 101 above. This new grounds of rejection, in particular, results in this action being NON-FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanda L. Harris whose telephone number is 703-308-8358. The examiner can normally be reached on M-F 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Chanda L. Harris
Examiner
Art Unit 3714

ch.